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Gum Arabic acacia for manufacturing of tablet and pellets coating materials

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Gum Arabic is a complex, loose aggregate of sugars and hemicelluloses composed of Arabic acid nucleus connected with calcium, magnesium, and potassium besides Arabinose, Galactose, and Rhamnose. Gum Arabic is stable flexible material. This study aimed to use gum Arabic in manufacturing of Tablet coating material using water and plasticizer to add elasticity and flexibility. Gum Arabic acacia is used in (10%), concentration in a pilot small coating machine with an inlet temperature 400c, and spraying rate 10mls every 5 minutes on the top of Placebo tablet-bed while continuous drying. Gum: water ratio and plasticizer was determined by trial and error method to obtain the optimum level for the final coat characteristic. Physical tests were done for the tablets before-and after the process. An accelerated stability study for three months was done. The result showed the optimum concentration ratio was 10% Gum Arabic with 1% plasticizer. While other ratio variations showed cracking, and roughness in the surface. Physical examination ended to satisfying coat appearance with elegant, smooth picture. Gum Arabic is suitable material for tablets coating. The final property varies with the change in ratio of formula. Colors and anti-transparency additives are required for technological identification & customer's needs. The ratio of 10:1 is the optimum to be adopted in manufacture film coating.

Biography

Waddah Faroug Hassan Mohamed Nour has completed his Masters from Omdurman Islamic University. He is a Pharmacist in Federal Ministry of Health – Sudan. He has been serving as a member of National Medicine & Poisons Board – Sudan.

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